

WHAT IS CLAIMED IS:

1. A fluid delivery device for a printing machine comprising:
  - a rotating roller having a roller surface with a roller radius of curvature, the roller surface carrying a fluid film; and
  - a metering element having an edge for splitting the fluid film and a first concave surface facing the roller surface;
  - the metering element being movable with respect to the roller surface.
2. The device as recited in claim 1 wherein the metering element has a second concave surface opposite the first concave surface.
3. The device as recited in claim 1 wherein the first concave surface has a radius of curvature similar to that of the roller radius of curvature
4. The device as recited in claim 1 wherein the first concave surface corresponds to an arc of 10 degrees or more of the roller surface.
5. The device as recited in claim 1 wherein the metering element is rigid
6. The device as recited in claim 1 wherein the metering element has a horizontal bottom surface.
7. The device as recited in claim 1 wherein the metering element has an edge movable radially with respect to the roller.
8. The device as recited in claim 1 wherein the fluid is ink.
9. The device as recited in claim 1 wherein a thickness of the fluid film downstream from the metering element is half of an average distance of the concave surface from the roller surface.

10. A method for metering fluid in a printing press having an operating speed comprising the steps of:

supplying fluid to a supply container;

rotating a roller so as to form a film of the fluid on a surface of the roller;

and

splitting the film using a metering element, the metering element having a concave surface facing the surface of the roller.

11. The method as recited in claim 10 wherein the roller has a surface speed similar to that of a plate or image cylinder of the printing press.

12. The method as recited in claim 10 wherein metering element has an edge movable radially with respect to the roller.

13. The method as recited in claim 11 further comprising setting a distance between the concave surface and the surface of the roller.